IN THE SPECIFICATION

Page 4:

Please replace the second full paragraph as follows:

This task is solved by a process ~~according to claim 1~~ as well as by a device ~~according to claim 9~~ described herein.

Page 6:

Please replace the second full paragraph as follows:

In order to accelerate the decontamination process, it has been proven to be beneficial to set up at least one light source within the decontamination device to provide radiation in the wave length range between 150 nm and 300 nm. Particularly at a wavelength of 185 nm or 254 nm, highly reactive ozone is formed from the oxygen supplied. According to the invention, at least one light source 5b is connected to the control device 4, and the UV radiation dosing is regulated at the same time with the O_2 supply.

Please replace the third full paragraph as follows:

Fortunately the level of contamination can be measured with one or several oscillators such as quartz crystal microwave(s) 3 that react to a change in their surface mass through a change in the resonance frequency. In a preferred embodiment, at least one measuring device is shown and at least one quartz crystal microwave is arranged inside the lithography device 10. With quartz crystal microwaves, the smallest amount of contamination can be detected on a coated piezoelectric quartz.

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Please replace the second full paragraph as follows:

In another preferred embodiment, the decontamination device has at least one additional light source 6a and at least one detector 6b, which are arranged inside the lithography device 10. The degree of contamination is then preferably determined via reflectivity measurements. The reflectivity of optical elements, in particular, is very strongly dependent on possible contamination. Apart from the high level of sensitivity toward possible contamination, this measuring method has the advantage of using reflectivity measuring to determine the most important target size for the lithography device.

Please replace the third full paragraph as follows:

In a similarly preferred embodiment, a polarizer 7a is set up in the beam path from at least one light source, near the light source and an analyzer 7b is set up near the detector. In this way, the formation of the layer of carbon contamination and its destruction using oxidative purification can be traced ellipsometrically. In this case, a helium-neon laser is selected as the light source. Its light is beamed from outside into the EUV lithography device through a corresponding port or glass window. Monitoring the density of the carbon contamination coating is possible by measuring the p- and s- polarized laser light reflected.

Please replace the fourth full paragraph as follows:

Another preferred embodiment consists of providing the means 8 to measure the ~~flow of photons~~ photocurrent within the framework of the measuring device, and connecting this to optical elements in the EUV lithography device. In the event of the formation of a contaminated layer of carbons on the molybdenum-silicon, multi-layered systems in a EUV lithography device, a change in the photon stream occurs, which can be measured with radiation in the application wavelength of extreme ultraviolet, e.g. 13.4 nm.

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Please replace the first full paragraph as follows:

Brief Description of the Drawings

~~The invention should be explained in more detail using a sample embodiment.~~ The invention will be better understood and other features and advantages will become apparent by reading the detailed description of the invention, taken together with the drawings, wherein:

Please replace the second full paragraph as follows:

~~Figure 1 shows a schematic diagram of the control circuit for controlling the degree of contamination, i.e. removing the contamination.~~

FIG. 1 is a diagram of a process for in-situ decontamination of an EUV lithography device.

FIG. 2 is a schematic diagram one embodiment of an EUV lithography device having a device for in-situ decontamination of an optical element therein.

Please replace the third full paragraph as follows:

~~The figure~~ FIG. 1 shows a schematic illustration of a sample embodiment, in which the dotted line indicates vacuum recipient 1 within the EUV lithography device, or in larger installations, vacuum recipient 1 in which the EUV lithography device as a whole is set up. Optical element 2 and the oscillator or quartz crystal microwave 3 are set up within vacuum recipient 1. Optical element 2 involves reflectors with molybdenum-silicon, multi-layered systems for a wavelength of 13.4 nm. At this wavelength, the silicon-wafer is exposed by means of the lithography device.

Please replace the fourth full paragraph as follows:

In order to obtain the same conditions with quartz crystal microwave 3 as for optical element 2 within the EUV lithography device, the piezoelectric quartz in quartz crystal microwave 3 is equipped with a corresponding molybdenum-silicon,

multi-layered coating. Moreover, the quartz crystal microwave 3 is arranged within vacuum recipient 1 in such a way that the piezoelectric quartz is exposed to EUV radiation <u>from source 1a</u> of the same intensity, i.e., power density, as for optical element 2.

Page 11:

Please replace the first full paragraph as follows:

Analogous to the embodiment samples shown in the figure, instead of the quartz crystal microwave 3, a medium can be provided to measure the ~~photon stream~~ <u>photocurrent</u> or light source and a detector to measure the reflectivity, i.e., in connection with a polarizer and analyzer to determine the density of the contamination layer ellipsometrically. In addition, while oxygen is being supplied, residual gas analyses can help determine how much contamination has already been broken down, and this data from the computer can be used to check the amount of contamination and adjust the supply of oxygen.